

Prolonged Seizure Activity

Guideline: All episodes of prolonged seizure activity should be recognized and treated in a timely manner according to accepted standards of medical care.

DEFINITIONS:

Prolonged seizure activity: Five (5) minutes of continuous seizure activity, or fifteen (15) minutes of repetitive seizures.

Status epilepticus: Seizure activity lasting thirty (30) minutes or more.

RATIONALE:

1. The goal of treatment is termination of seizure activity with minimal depression of consciousness and cardiopulmonary function.
2. Status epilepticus is a medical emergency which, left untreated, may result in significant morbidity or death.

EXPECTED OUTCOMES:

When prolonged seizure activity is identified, the individual should receive prompt and complete care.

1. Staff should notify the nurse:
 - a. when a seizure continues for more than two consecutive minutes, or
 - b. when the individual experiences two or more brief generalized seizures in less than an hour with or without full recovery of consciousness between seizures.
2. The nurse should assess the condition of the individual immediately after receiving the call for assistance.
 - a. The assessment includes the level of cardiopulmonary risk
 - b. If appropriate, instructions should be given to staff to:
 1. start oxygen by nasal cannula or mask,
 2. position patient's head for optimal airway patency,
 3. obtain and record vital signs including pulse oximetry, and/or
 4. suction periodically
 - c. Results of the observations made by staff, the nurse's assessment, and the action taken should be documented in the nursing notes.
3. If the seizure activity continues for more than 5 minutes from onset, the nurse should:
 - a. call the physician for medical consultation, and
 - b. document the time of call and results of the contact with the physician in the nursing notes.
4. An immediate plan of care should be determined through initial medical consultation.
 - a. Orders should be written on the medical order sheet.
 - b. The overall plan of care should be documented in the nursing notes.
5. If seizure activity continues for more than 15 minutes and onsite medical consultation is not available, EMS should be called to transport the person to an acute care facility.
6. **Clusters of increased seizure activity** - Diazepam rectal gel (Diastat) can be used in the management of selected, refractory patients with epilepsy, on **stable regimens of anticonvulsants**, who require treatment to control bouts of increased seizure activity.

Protocol for Use of Rectal Diazepam Gel for Treatment of Clusters of Increased Seizure Activity

1. The decision to use rectal diazepam gel should be individualized with criteria for administration clearly identified for each patient.
2. In general, rectal diazepam gel can be considered for patients experiencing:
 - a. 5 minutes of continuous seizure activity, or
 - b. 10 minutes of repetitive seizures
3. PRN orders may be written for individuals who have a history of clusters of seizure activity. A physician should be called to authorize use whenever possible or notified after use if not reached prior to administration.
4. If the person does not cease seizure activity within 10 minutes of administration:
 - a. A second dose of the medication may be given under the direction of the physician as long as appropriate staff are available to maintain the airway, OR
 - b. The individual should be transferred to an acute care hospital for further treatment.
5. Rectal diazepam gel may be administered by a licensed nurse (RN or LPN) or physician.
6. Patients must be clinically assessed, treated, and monitored to:
 - a. determine that the episode in question is appropriate for treatment with rectal diazepam gel.
 - b. ensure that all “first aid” measures for seizures are carried out.
 - c. determine if the medication is effective in stopping the seizure activity.
 - d. be aware of signs and symptoms that require immediate and direct medical intervention.
7. A person receiving diazepam rectal gel should be carefully monitored on a 1:1 basis for 4 hours after the original administration of medication. The following observations should be made and recorded in the individual’s record every 15 minutes for the first hour after administration and every hour (or more frequently, if indicated) for the next three hours:
 - a. Vital signs (pulse, respirations, and blood pressure)
 - b. Level of consciousness
 - c. Changes in characteristics of the skin (color/temperature; pale/cyanotic, cool/warm; dry/clammy)
 - d. Seizure status – whether the seizures have continued or stopped
8. The physician should be notified immediately if there are any symptoms of an allergic reaction which may include: rash, itching, swelling, dizziness, or trouble breathing.
9. For elderly and debilitated patients, it is recommended that the dose be rounded downward instead of upward to the next available dose to decrease the likelihood of ataxia or over sedation.
10. It is not recommended that rectal diazepam gel be used to treat more than 5 episodes of cluster seizures per month or more than 1 episode of cluster seizures in 5 days. If cluster seizure activity is more frequent than that, the daily anticonvulsant regimen, anticonvulsant blood levels, and the individual’s overall health status should be evaluated and a neurological consultation considered.
11. Special caution must be taken when diazepam is considered for use in patients on phenobarbital or primidone. This is because of the increased likelihood of adverse reactions to diazepam including hypotension, central nervous system depression, and respiratory depression.

Table I. Dosage and Administration of Rectal Diazepam Gel

Age in Years	Recommended Dose
2 through 5	0.5 mg/kg
6 through 11	0.3 mg/kg
12 and older	0.2 mg/kg

Because rectal diazepam gel (Diastat) is provided in fixed, unit-doses of 5, 10, 15, and 20 mg., the prescribed dose is obtained by rounding upward to the next available dose. Table II provides acceptable weight ranges for each dose and age category, such that patients will receive between 90% and 180% of the calculated recommended dose. The safety of this strategy has been established in clinical trials.

Table II. Weight Ranges for Dose and Age*

2 – 5 Years 0.5 mg/kg		6 - 11 Years 0.3 mg/kg		12+ Years 0.2 mg/kg	
Weight (kg)	Dose (mg)	Weight (kg)	Dose (mg)	Weight (kg)	Dose (mg)
6 to 11 kg	5 mg	10 to 18 kg	5 mg	14 to 27 kg	5 mg
12 to 22 kg	10 mg	19 to 37 kg	10 mg	28 to 50 kg	10 mg
23 to 33 kg	15 mg	38 to 55 kg	15 mg	51 to 75 kg	15 mg
34 to 44 kg	20 mg	56 to 74 kg	20 mg	76 to 111 kg	20 mg

* Please note the differences in dose based on age and weight.

GENERAL GUIDELINES

During a seizure: (*Ictal stage*)

1. **Ensure adequate ventilation**
 - a. Loosen clothing, postural support devices and/or restraints.
 - b. DO NOT try to force an airway or tongue blade through clenched teeth.
 - c. Give oxygen by nasal cannula or mask.
 - d. Suction as necessary.
 - e. Turn the person into a side-lying position as soon as convulsing has stopped.
2. **Protect the person from injury** (e.g., help break fall, clear the area of furniture).
3. **DO NOT restrain movement.**
4. **Remain with the person and give verbal reassurance.**
5. **Observe and document the following:**
 - a. Date, time of onset, duration
 - b. Activity at time of onset
 - c. Presence of aura (if known)

- d. Movements (*site of onset of first movement is very important as well as pattern or order of progression or spreading involvement*)
 - Head/face (twitching/grimacing; up/down; extended/flexed; teeth and/or jaw clenched)
 - Extremities (rigid/jerking, symmetrical/rhythmic, extended/flexed)
 - Postural changes (stiff, relaxed, writhing, tremulous, arching back)
 - e. Level of consciousness (confused, dazed, excited, unconscious)
 - f. Respirations (impaired/absent; rhythm and rate)
 - g. Skin changes (color/temperature; pale/cyanotic, cool/warm; perspiration/dry/clammy)
 - h. Pupillary size and reaction to light
 - i. Deviation of eyes or head to particular side
 - j. Eyes: open, rolling or closed, eyelids flickering
 - k. Tongue or cheek bitten
 - l. Frothing
 - m. Speech difficulty
 - n. Presence of other unusual and/or inappropriate behaviors
6. **Provide as much privacy as possible** for the individual during and after seizure activity.
7. Provide other supportive therapy as ordered by physician or according to facility protocol.

REFERENCES

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